The Management University of Africa

MUA

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POST GRADUATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

DEGREE OF MASTER OF BUSINESS ADMINISTRATION

MBA 508: STRATEGIC MANAGEMENT INFORMATION SYSTEM

DATE: ***18TH JULY 2017***

DURATION: 3 HOURS

MAXIMUM MARKS: 60

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **FOUR (4)** questions.
4. Question **ONE is compulsory.**
5. Answer any other **TWO** questions.
6. Question **ONE** carries **30 MARKS** and the rest carry **15 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

WHEN BIGGER IS BETTER

Until a few years ago, a data warehouse or transactional database that held 1 terabyte (TB) of data was considered big. Today a "big" database holds tens of terabytes. The data warehouses used by AT&T and Axfood are examples, and they provide special benefits.

AT&T Labs maintains a 26-TB data warehouse, which holds two years of detailed records of local and long-distance telephone calls on the AT&T network. The data in the warehouse are split between computers in two different locations, and the warehouse runs on Sun Microsystems Enterprise 10000 servers, with 2,670 disk drives for storage. AT&T stores data over two years old offline. About 3,000 AT&T employees routinely tap into the warehouse to check billing errors, to analyze call volumes to plan network expansions and upgrades, and to calculate prices to pitch new services to customers.

One of the most important benefits of the warehouse is the ability to analyze data shortly after they are captured by the system. Data from AT&T's operational billing and network management systems enter the warehouse directly so that the warehouse can provide answers to queries almost instantly. For example, the warehouse enables AT&T to analyze consumer calls in response to AT&T television ads an hour after they run. An analyst can query the warehouse for all calls made to a country from a specific area code during a specific month and obtain an answer in less than a minute. Before AT&T built this warehouse, marketing personnel had to wait four to six weeks for billing reports to determine whether an ad produced sales.

Axfood, a major grocery chain with hundreds of retail stores throughout Scandinavia, also wanted instant analysis of its customer data. It already held a 20 percent market share, but the retail food industry is fiercely competitive, with razor-thin profit margins and many perishable goods with a limited shelf life. Axfood management believed its company could strengthen its leadership position in the

Nordic retail food market by offering unique products combined with superior convenience and service. Axfood is based in Stockholm, Sweden, has 8,000 employees, and generates about US$4 billion in annual revenue.

Like many other retail chains, Axfood had been gathering point-of-sale data about customer purchases and analyzing the data to make decisions about what items to stock in its stores. But its data-warehousing technology was not up to the task. The company was using two data warehouses for this purpose, one running on an Oracle DBMS and the other on Microsoft SQL Server. These warehouses could support only weekly analyses of all the point-of-sale data and could not scale to handle Axfood's growing volume of data. Axfood's management had determined that by 2005 it would need 10 terabytes of storage.

Axfood's management wanted to know about which products customers decided to buy within an hour of the actual purchase. If its hundreds of retail outlets experienced a sudden run on a particular brand of paper towels, for example, Axfood could replenish store shelves by the next day. Accurate and up-to-date customer purchase data would also help Axfood minimize excess inventory by enabling it to stock its shelves with items customers were sure to buy. "This level of responsiveness is the only way to maintain customer loyalty," states Axfood's data architect. "By having a better grasp on customer buying activities, we could make more targeted purchasing decisions, which would ultimately save us money and generate more revenue."

Axfood management determined that it could reduce the total cost of ownership of its technology assets for data management if it consolidated on a single platform for its data warehousing. It selected IBM's DB2 Universal Database Enterprise Server Edition for AIX, Version 8.1 running on an IBM pSeries 670 server, with 2.3 terabytes of storage in an IBM Total Storage Enterprise Storage Server. The pSeries 670 server met Axfood's requirements for a high level of performance and availability. It is large enough to host other applications besides the data warehouse, enabling Axfood to get a higher return on its hardware investment. This platform is more scalable, cost-

effective, and easier to manage than the Oracle and Microsoft systems and can easily support Axfood's data management and storage needs.

Axfood's DB2 data warehouse uses Data Stage from Ascential Software to extract, transform, and load sales data into the DB2 database, which stores and consolidates all the merchandise, stock, and purchase data.

Once the Axfood data warehouse is at full capacity, the company should recoup all the costs of its investment within two to three years. Axfood also expects the cost of maintaining the data warehouse to decrease significantly in its third year of operation because of the declining need for information systems staff to administer it. The company can then allocate more information systems staff to more critical areas.

The data warehouse has helped transform Axfood into a much more agile and proactive company where the products customers want are instantly available on store shelves when and where they need them. The DB2 data warehouse will provide Axfood with a crystal-clear view of its customers' shopping habits well into the future. Never again will rapid business changes take it by surprise.

Required:

a) Explain how large data warehouses provide value for a business **(8 Marks)**
b) Discuss the special technology challenges they pose **(6 Marks)**
c) Identify the **Four** stages of Data Mining **(6 Marks)**
d) Explain the Information Systems that the organization can employ to have a competitive advantage **(10 Marks)**

QUESTION TWO

a) Explain **Six** importance of information systems in the world today and how they are transforming organizations **(3 Marks)**
b) Using relevant examples differentiate between structured and unstructured decisions **(4 Marks)**
c) Explain **Four** roles of information systems in supporting various levels of

business strategy **(8 Marks)**

QUESTION THREE

a) Explain the term quality from customers perspective **(5 Marks)**

b) Analyze **Five** strategic initiatives employed by organizations to gain competitive advantage **(10 Marks)**

QUESTION FOUR

a) Explain the term Intellectual Property **(2 Marks)**

b) Describe the Group Decision Support System (GDSS) **(5 Marks)**

c) Analyse the structural organization change that are enabled by Information technology **(8 Marks)**